

REMARKS

Favorable reconsideration of this application is respectfully requested.

Claims 1, 3, 4, 9, 13, 18, and 20-30 are pending in this application. Claims 6, 8, 10-12, 14, 15, 17, and 19 are herein canceled without prejudice. Claims 1, 3, 4, 6, 8, 20-22, 24-26, 28, and 30 were rejected under 35 U.S.C. § 112, second paragraph. Claims 1, 17-19, and 28-30 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. patent application publication 2001/0020925 to Hattori et al. (herein "Hattori") in view of U.S. patent application publication 2003/0053017 to Shi et al. (herein "Shi"). Claims 3, 4, 6, and 8-15 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori in view of Shi and in further of U.S. patent application publication 2002/0149549 to Ohta et al. (herein "Ohta"). Claims 20-27 were rejected under 35 U.S.C. § 103(a) as unpatentable over Hattori in view of Shi and in further view of U.S. patent application publication 2002/0145579 to Yamakita et al. (herein "Yamakita"). The above-noted rejections are traversed as now discussed.

Addressing first the rejection under 35 U.S.C. § 112, second paragraph, the claims are herein amended to clarify the language noted as unclear.

First, each of the independent claims now consistently recites an "Optically Compensated Bend (OCB) mode liquid crystal", to clarify the previous abbreviation, and to correctly recite "OCB" in claim 30. The claims are also herein amended to further define the "off signal", and the output of different voltages based on the off signal. In that respect the claims more clearly indicate the "off signal" is a signal to turn off the power supply of the liquid crystal display apparatus.

In view of the presently submitted claim amendments the outstanding rejection under 35 U.S.C. § 112, second paragraph, is believed to be overcome.

Addressing now the above-noted prior art rejections, the claims are currently written to patentably distinguish over the applied art.

The claims are herein amended to clarify features recited therein. Independent claim

1 now more clearly recites:

said liquid crystal display apparatus has a power supply OFF sequence period which is used when a power supply of said liquid crystal display apparatus is turned off, said power supply OFF sequence period including at least a first OFF sequence period, a second OFF sequence period, and a third OFF sequence period,

i) in said first OFF sequence period, when an off signal to turn off said power supply of said liquid crystal display apparatus is output from the switch, said driver applies alternating voltages with different polarity equal to or lower than a maximum voltage which can be applied to said liquid crystal layer, said applied alternating voltages exceeding a voltage of an image display region to said liquid crystal layer,

ii) in said second OFF sequence period after said first OFF sequence period, the driver applies alternating voltages with different polarity equal to or higher than a critical voltage of the OCB mode liquid crystal which can be applied to each of pixels of the liquid crystal layer for a predetermined time in order to transfer said liquid crystal layer to said bend orientation, and

iii) in said third OFF sequence period after said second OFF sequence period, the driver applies a voltage lower than the critical voltage of the OCB mode liquid crystal for a predetermined time in order to transfer the liquid crystal layer to said splay orientation, and thereafter supplying of power to the driver from the liquid-crystal driving power supply is stopped to turn off said power of said liquid crystal display apparatus.

Independent claim 30 is amended to recite similar features as noted above. The above-noted features clarified in the claims are believed to be clear from the original disclosure, see for example embodiment 3 noted at page 32, line 19 *et seq.* and Figure 4 in the present specification.

The above-noted features clarified in each of independent claims 1 and 30 as currently written, and accordingly claims dependent therefrom, are believed to clearly distinguish over the applied art.

According to the above-noted features recited in independent claims 1 and 30, a liquid crystal display apparatus includes a power supply OFF sequence period or power supply OFF sequence step used when a power supply of the liquid crystal display apparatus is turned off. Further, as now clarified in each of independent claims 1 and 30, the power supply OFF sequence period or power supply OFF sequence step are executed in an order of a first OFF sequence period or step, a second OFF sequence period or step, and a third OFF sequence period or step, and thereafter supply of power to the driver from the liquid crystal driving power supply is stopped to turn off the power supply of the liquid crystal display apparatus.

Applicants respectfully submit none of the applied art discloses or suggests the features now clarified in independent claims 1 and 30 of each of the claimed first, second, and third OFF sequence periods or steps.

With respect to the previously recited claim features of outputting an off signal from the switch, a driver applying a voltage lower than a predetermined voltage and thereafter supplying power to the driver for the liquid-crystal driving power supplying being stopped, the outstanding Office Action cited Hattori at Figures 2 and 3 and paragraphs [0086]-[0089], [0103].¹

In reply to that grounds for the rejection to the claim language as previously written, Hattori discloses a transition-driving circuit 13 for outputting a voltage pulse for performing a transition of a liquid crystal from spray alignment to bend alignment,² and then when the application of the voltage pulse for the transition is finished shifting the liquid crystal to a display-driving mode.³

Applicants submit such disclosures in Hattori, however, are not directed to the features clarified in the claims as such disclosures in Hattori do not disclose or suggest the

¹ Office Action of May 14, 2009, middle of page 4.

² Hattori for example at paragraphs [0086] and [0088].

³ Hattori for example at paragraph [0089].

specifics of the now recited first OFF sequence period or step, second OFF sequence period or step, or third OFF sequence period or step.

Thereby, applicants respectfully submit Hattori do not disclose or suggest the features now recited in each of independent claims 1 and 30 as currently written.

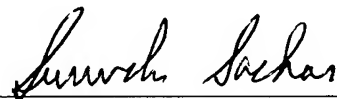
Moreover, no disclosures in any of the previously cited art to Shi, Ohta, or Yamakita are believed to cure the above-noted deficiencies of Hattori.

In view of the present response applicants respectfully submit the claims as currently written positively recite features neither taught nor suggested by the applied art and thus are allowable over the applied art.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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